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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,669	09/29/2003	Masato Yoshino	P24073	8272
7055	7590	11/13/2006		
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER NGUYEN, XUAN LAN T	
			ART UNIT 3683	PAPER NUMBER

DATE MAILED: 11/13/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/671,669  
Filing Date: September 29, 2003  
Appellant(s): YOSHINO ET AL.

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Daniel B. Moon  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 3/20/06 appealing from the Office action  
mailed 9/19/05.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,031,968	TAKADA	7-1991
4,603,918	LEIBER ET AL.	8-1986

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

- Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Takata (USP 5,031,968).

Takata shows a braking system in figure 1, as in the present invention, comprising: a brake pedal 1, a stroke sensor 2 that outputs a stroke signal in response to a stroke of the brake pedal; an accumulator 5 that accumulates a pressurized braking liquid; a proportional pressure controller 9, 10, 18, 13 that controls the pressure of the pressurized braking liquid, and supplies the pressurized braking liquid to a wheel, the proportional pressure controller including a spool 9; and a push rod 8 connected to the brake pedal 1 and movable between a first position spaced from the spool as shown in figure 1; and a second position contacting the spool, see column 6, lines 12-14, wherein the push rod moves in response to the stroke of the brake pedal in order to contact and push the spool; wherein the proportional pressure controller controls the pressure of the pressurized braking liquid in accordance with the stroke signal and free from the motion

of the push rod before the push rod contacts and pushes the spool, see column 4, lines 29-42 and column 6, lines 8-20, and in accordance with the stroke signal and the motion of the push rod after the push rod contacts and pushes the spool, see column 9, line 60 to column 10, line 8.

- Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takata (USP 5,031,968) in view of Leiber et al. (USP 4,603,918).

Takata's braking system, as rejected in claim 1, lacks a resilient spring as a part of the push rod. Leiber et al. teach a restoring spring 35 in figure 3 in order to properly return the push rod 15 should the pressure in chamber 13 is inadequate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Takata's braking system to have included a restoring spring such as taught by Leiber et al. in order to properly return the push rod should the pressure in the dynamic pressure chamber is inadequate to return the push rod to an original position.

#### **(10) Response to Argument**

*Appellant argues that Takata's proportional pressure controller does not control pressure of pressurized braking liquid.*

Appellant argues that the pressurized braking liquid being defined in claim 1 as the liquid which is accumulated in the accumulator (page 7, first paragraph of the Brief dated 3/20/06). Looking at figure 8 of Appellant, one can see that proportional pressure controller 110 can not perform the task of controlling the pressure of pressurized braking liquid that accumulates in accumulator 36. Only the pump that is located

upstream of accumulator 36 can perform the task of controlling the pressure of pressurized braking liquid that accumulates in accumulator 36 as shown in figure 8.

Since Appellant insists that the pressurized braking liquid being defined in claim 1 as the liquid which is accumulated in the accumulator. The Examiner would like to point out that Takata shows clearly a pump, denoted as a P in a circle, located upstream of accumulator 5, in exactly the same arrangement as Appellant's. Hence, Takata's brake system does mirror the arrangement of Appellant's brake system.

*Appellant further argues that Takata's push rod does not move between positions spaced from spool and contacting spool.*

On page 8 of the Brief, Appellant argues that Takata's push rod does not move between positions spaced from spool and contacting spool under normal working conditions but only for emergencies. Appellant's argument is more specific than the claim language. Claim 1 does not specify the condition of normal or emergency working condition.

*Appellant also argues that Takata does not include recited control modes of proportional pressure controller.*

As stated previously and above, column 4, lines 29-42 of Takata shows that the dynamic pressure in chamber 7 is used to move spool 9 and to counteract the force of push rod 8 in the situation when push rod 8 does not contact spool 9. Takata further shows that the pedal stroke is used for normal operating condition when push rod 8 is not contacting spool 9 and also for system failure when push rod 8 is contacting spool 9 in the last four lines of the Abstract.

*Appellant finally argues that the modification of Leiber will destroy the teachings of Takata.*

The quoted portion of column 1, lines 58-68, is reproduced here to show that Takata does not teach away from the modification of Leiber but is aware of the use of the spring and would provide means to remove the reaction force of the spring in case of failure. **(Note the removal of force, not the removal of the spring itself).** In other words, the spring remains with the brake system but other means would be there to remove the force from the spring should the brake system fails. Hence, the combination of Takata and Leiber is a proper combination.

*"As one solution to these problems, it has been proposed to control the relation between the treading force and pedal stroke by use of a spring. In this arrangement, the requirement (4) is met. But it is necessary to provide means for removing the reaction force of the spring in case the dynamic pressure line should fail, in order to prevent the function of (1) from declining owing to the reaction force of the spring. (Such means is disclosed e.g. in Japanese Patent Unexamined Publication 61-163050 by the present applicant). Thus it is sufficient to satisfy the requirement (5)."*

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Lan Nguyen

Primary Examiner

AU 3683

 10/31/06

Conferees:

James McClellan

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